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5011621901-DUE1

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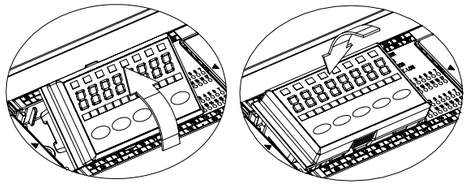
DVPDU-01 Digital Setup Display

Instruction Sheet

1 WARNING

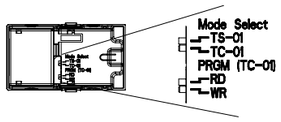
⚠ Please power down the MPU of the PLC prior to install the DU-01, which is connected via a high-density connector. Also please read the figures on the right for operation correctly to prevent damage.



2 INTRODUCTION

DU-01 Digital Setup Display has two operation modes, TS-01 and TC-01. The mode selection switch locates at the back of the DU-01. Factory setting is TS-01 mode. The current operation mode will be displayed every time when power up.

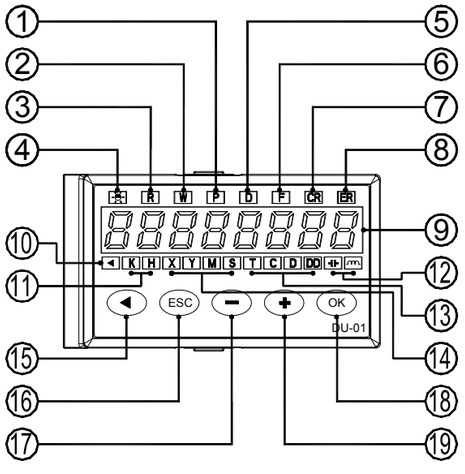
TS-01 TC-01



Back of the DU-01

1. In **TS-01** mode, DU-01 (specified as TS-01 hereof) has the following functions:
   - Read/Write both the internal devices of PLC (e.g. perpetual calendar, bit devices (X, Y, M, S) and word devices (T, C, D)) and the Control Register (CR) inside the extension units.
   - Support the read/write 32-bit data register.
   - Set Start-up display and power save mode.
   - Monitor the devices.
   - If connect the accessory cable to ES-series without perpetual calendar, the Time Display will start from 00-00-00 calculated by the microprocessor of DU-01 (timing error may occur).
   - Give RUN-STOP command to PLC.
2. In **TC-01** mode, DU-01 (specified as TC-01 hereof) has the following functions for DVP all series:
   - Read/write the program P, data register D and file register F from PLC.
   - Copy program and data.
   - Support the PLC password protection.

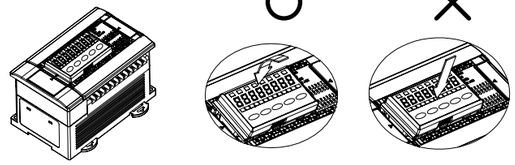
■ **Overview of the Product - Names of Parts**



1	P: program area indication (TC-01)
2	W: write (WR) indication (TC-01)
3	R: read (RD) indication (TC-01)
4	“In communication” indication
5	D: Data Register indication (TC-01)
6	F: File Register indication (TC-01)
7	CR: Control Register indication (Extension Module)
8	ER: Error message display
9	Display Area
10	Enter button ◀ indication
11	K (Decimal), H (Hexadecimal) indication
12	Contacts & coils of timer / counter indications
13	Word devices T, C, D, DD (32-bit) indication
14	Bit devices X, Y, M, S indication
15	Digit backspace / Run (TC-01)
16	Back to previous status
17	Enter number or select device
18	Confirm
19	Enter number or select device

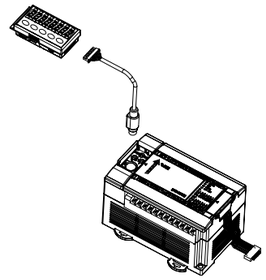
3 INSTALLATION & WIRING

1. Direct mounting to the expansion slot in the MPU of the EP/EH series



⚠ Please power down the PLC MPU prior to install the DU-01, which is connected via a high-density connector. Also please refer to the figures above for proper operation. Put the face-up DU-01 slantly in the extension slot, then push it down in arrow direction. **DO NOT** push it down vertically to prevent damage.

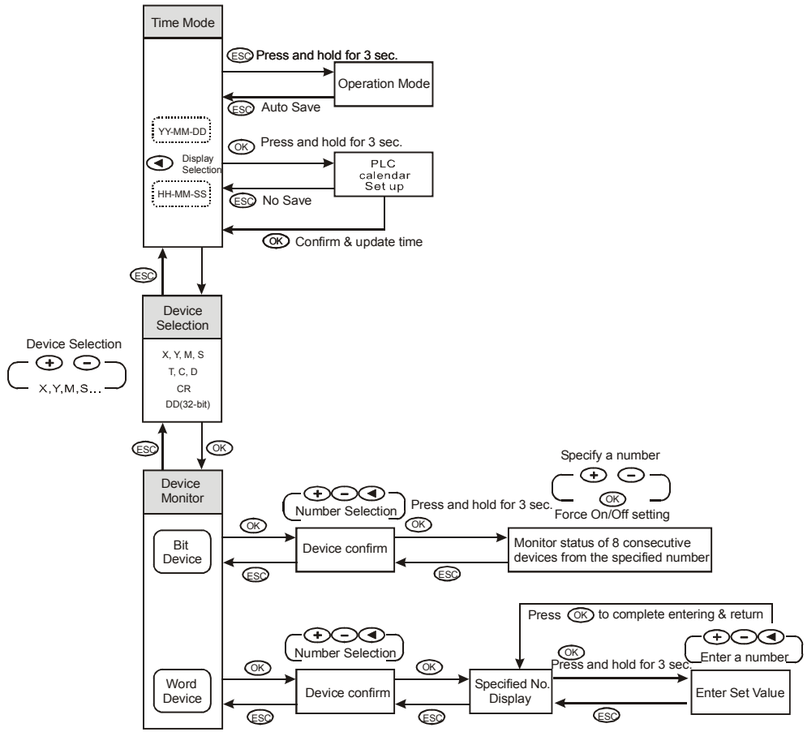
2. Connecting to DVP series PLC via accessory cable



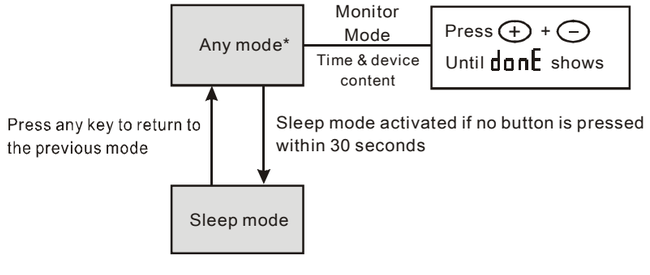
(No need to shut down the MPU)

4 TS-01 OPERATION

1. Switch DU-01 to TS-01 mode. (Please see the back of the DU-01)
2. Main Process



3. Start-up display mode setting (press ⊕+⊖ buttons simultaneously)

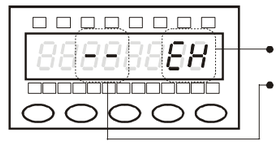


*Note: not include system operation mode setting

4. Please see the back page for detail information about the process of each mode.

5 TC-01 OPERATION

1. Switch the DU-01 to TC-01 mode (please see the back of the DU-01), and select RD (to read P, D and F in the MPU of PLC) or WR (to write the data in P, D, F of DU-01 to the MPU of PLC).



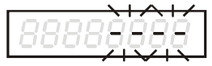
Note: P: Program, D: Data register, F: File register

2. TC-01 Password Key Setting

Password key setting of TC-01 can be set via WPLSoft. The purpose is to read/write to the key-locked PLC as long as the password setting matches with the one in PLC. To unlock the password key setting, please use WPLSoft as well.

a) Password Key Setting

- In RD or WR mode, press ESC button and hold for 3 seconds or more to enter password setting. See the figure on the right:

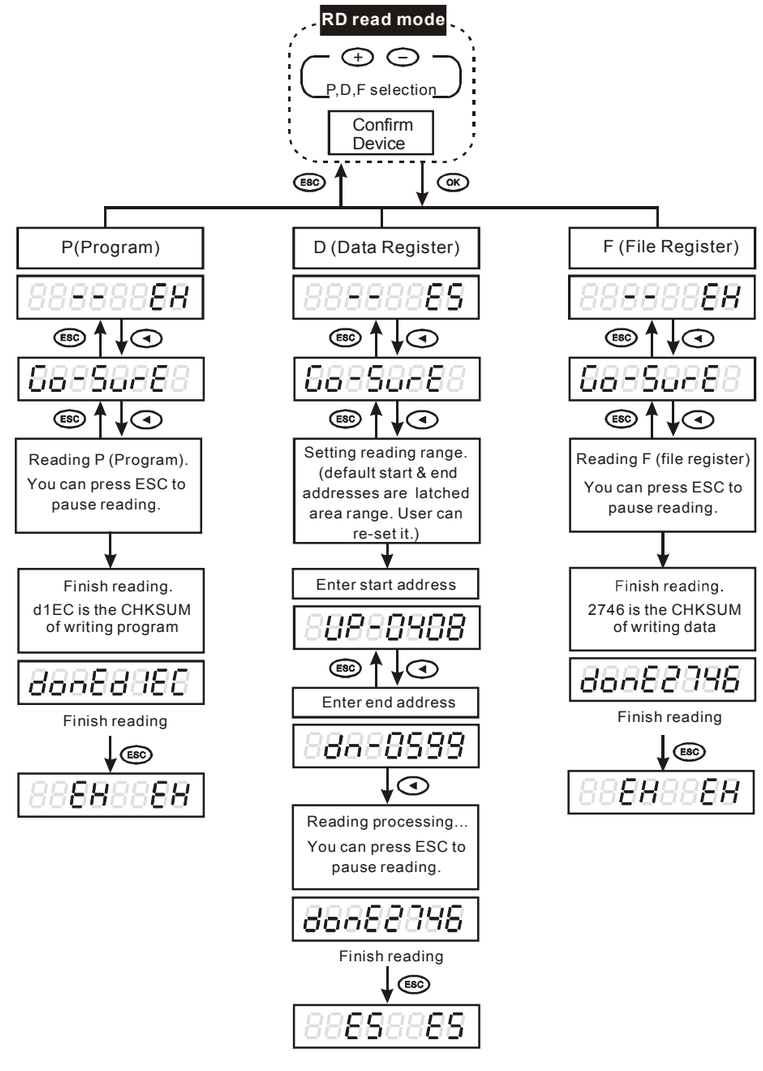


- Open WPLSoft ⇨ [Setting] ⇨ [TC-01 password key setting]. Select [Enter TC-01 password key], and operate as instructed.
- After setting, display shows the figure on the right. (KEY SET), then press ESC to exit.

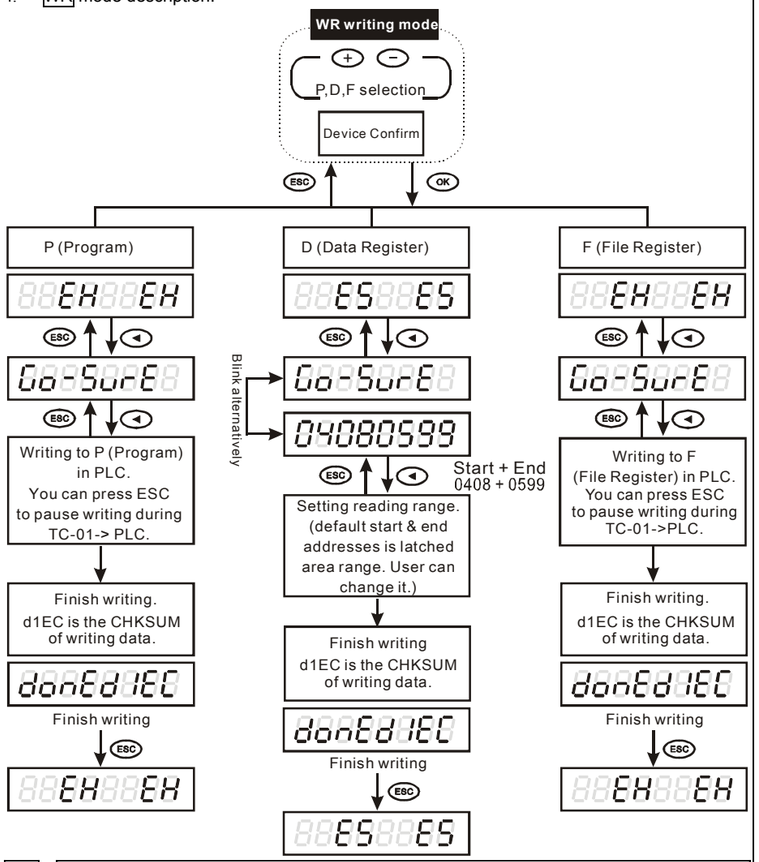
b) TC-01 has password key setting, therefore, only if the PLC has no password protection or with the same password with TC-01 can process the writing. It also writes the password to the PLC for added protection.

c) Password key clear (KEY CLR): Same as the operation above. Open WPLSoft, select [TC-01 password key clear], and operate as instructed.

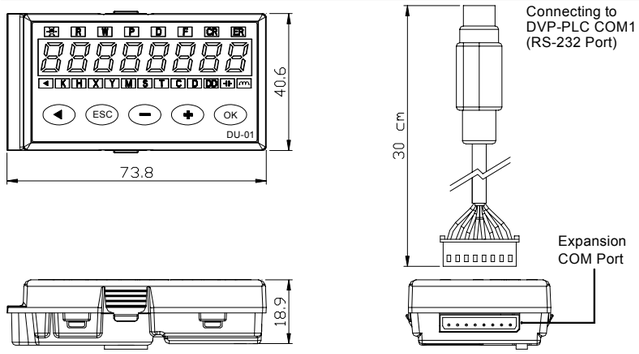
3. Clear P, D, F of TC-01: select the device (P, D or F) to be cleared, press ⊕+⊖ simultaneously, then press ESC.
4. RD mode description:



4. WR mode description:

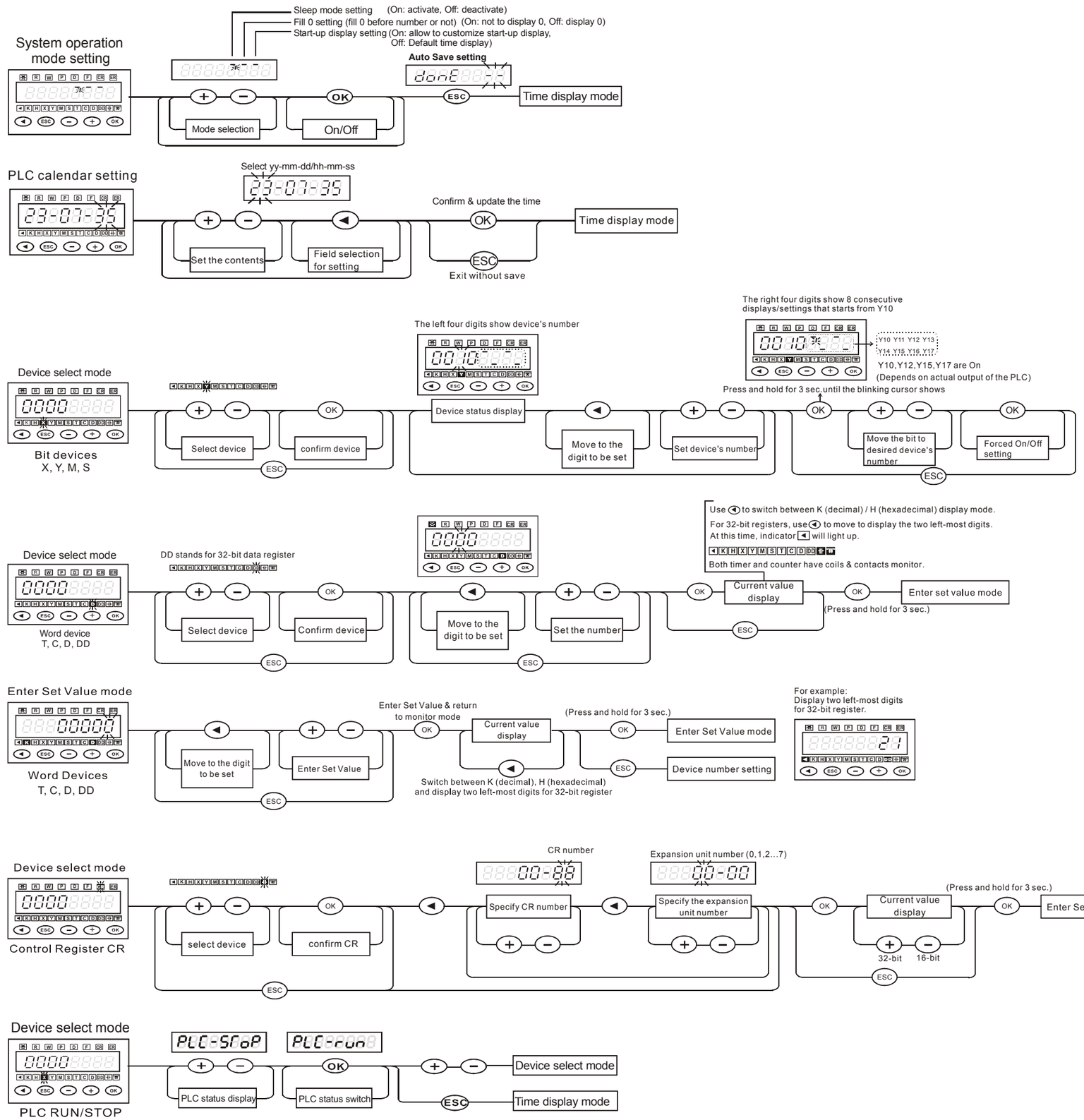


6 DIMENSIONS & ACCESSORY



The accessory cable connects the DU-01 (the extension COM port of figure above) and DVP-series PLC COM1 (RS-232) port. Therefore, the DU-01 can be connected to ES/SS/EX or SA/SX models via the cable, as well as direct installation in the extension slot of EP/EH models.

7 ERROR CODE TABLE

Code	Code Explanation & Troubleshooting
Error-00	P-read error. PLC is password-locked while the TC01 has wrong or no password key. Need unlock the password setting on PLC or set password in TC-01 via WPL.
Error-01	P-write error. PLC is password-locked while the TC01 has wrong or no password key; or the source model unmatched the destination model.
Error-02	D-read error. Illegitimate read range (read range only available for the general data registers of each models, not include special D)
Error-03	D-write error. The source model unmatched the destination model.
Error-04	F-read error. ES series does not have file registers.
Error-05	F-write error. The source model unmatched the destination model.
Error-06	PLC is running. Writing to P is not permitted.

■ Various process for operation modes under TS-01 mode